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The Learning Disability Center in Binghamton, New York, was established under the 1965 Elementary and Secondary Education Act. Specialized instruction is offered to all children reading 2 or more years below grade level in grades 3 through 6 and 1 year below grade level in grades 1 and 2. At the center, efforts are made to maintain communication with the classroom teachers. A comprehensive diagnostic report is developed and returned to the districts upon the child's entry, and a progress report is compiled every 3 months. The ratio of boys needing help in comparison to girls is eight to one, while 60 percent of all pupils enrolled in the clinic have repeated at least one school year. Instruction techniques used at the center are eclectic, although there is a tendency to use a linguistic approach. Typewriters, tape recorders, record players, overhead projectors, and the Language Master (Bell and Howell) are used to aid remedial reading instruction. (WL)

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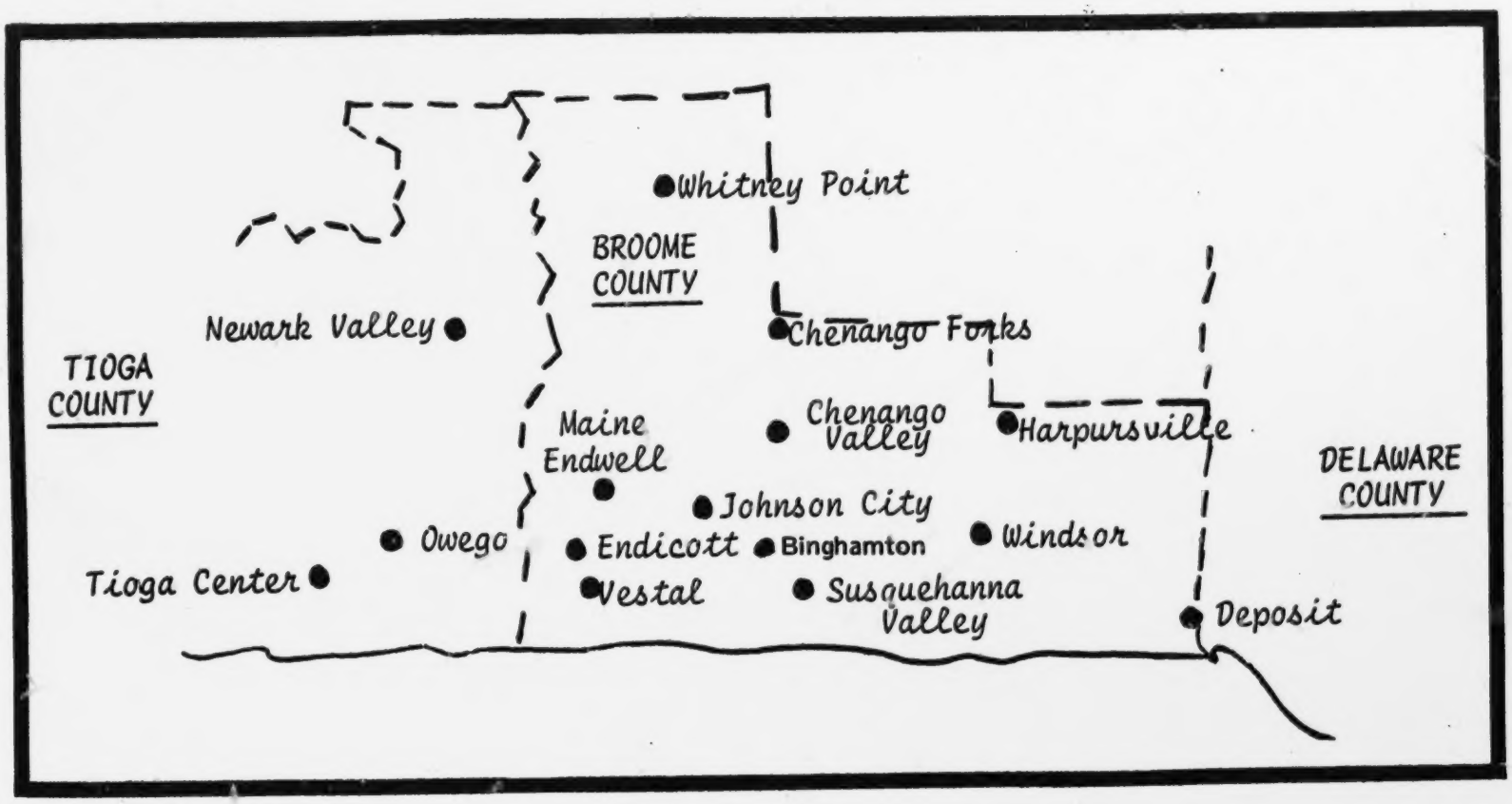
THE IMPLEMENTATION OF A REGIONAL LEARNING DISABILITY CENTER FOR THE TREATMENT OF PUPILS WHO MANIFEST THE DYSLEXIC SYNDROME



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Acknowledgement is hereby expressed to the Boards of Education, Chief School Administrators, Administrative and Instructional Personnel, Parents, Residents, and Pupils whose sustained cooperation made possible the implementation of the Learning Center.

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Boston, Massachusetts

THE IMPLEMENTATION OF A REGIONAL LEARNING DISABILITY CENTER FOR THE TREATMENT OF PUPILS WHO MANIFEST THE DYSLEXIC SYNDROME*

Session 22C. ESEA & the
Improvement of Reading Instruction

Introduction

The Learning Disability Center in Binghamton, New York, was established under provisions of Title III, Supplementary Centers and Services Program, of the Elementary and Secondary Education Act of 1965. In February, 1966, Mr. Richard P. McLean, Superintendent, Union-Endicott Central School District, acting on behalf of the area chief school administrators of fifteen public and two private school districts in Broome and part of Tioga Counties in the Southern Tier of New York State, submitted to the USOE an application

* The author wishes to acknowledge the assistance of Michael O. Bice and Dale Huebner in the preparation of the tables appended to this report.

to establish a centrally located facility whose primary purpose would be the diagnosis and treatment of pupils who manifest the dyslexic syndrome. In addition, the facility would establish a professional library and curriculum resource center with special emphasis on teaching pupils who were severe underachievers in reading; develop research papers to provide the cooperating school districts with information about pupil characteristics and successful instructional programs; sponsor a variety of in-service training programs for area teachers; and offer consultation services to school districts.

A Notification of Grant Award was issued by the USOE, and the Learning Disability Center became a reality as of July 1, 1966. The Center was housed in an old church school made available on a rent free basis by a parochial school district. The school has two floors and ten classrooms and required substantial renovation including painting of classrooms, equipping the school with appropriate lighting and electrical outlets, and adapting the structure to meet established fire prevention and safety regulations. Approximately six months were required to adapt the school to the needs of the Learning Disability Center.

From January to June, 1967, three supervisory staff members from the coop-

erating school districts formed an interim administrative team. The function of the team was to launch the activities of the Center on a pilot basis, recruit staff, purchase some essential equipment and supplies, and make arrangements for each of the cooperating school districts to transport selected pupils to the Center. From March to June, 1967, fifty-seven pupils received instruction from eight teachers who were assigned to the Center on a temporary basis by the cooperating school districts. In July, 1967, this writer was appointed director, and the Learning Disability Center became fully operational in September of that year. Shortly thereafter the name was modified to Learning Center to minimize the implication inherent in the word "disability."

Since the inception of the program every effort was made to satisfy the conditions under which Title III projects are approved. The Green report (1) issued by the Special Subcommittee on Education noted:

> The three basic purposes of the title III program are: to improve education by enabling a community to provide services not now available to the children who live there, to raise the quality of educational services already offered, and to stimulate and assist in development and establishment of exemplary elementary and secondary school educational programs to serve as models for regular school programs.

To achieve these objectives ample funds were provided for staffing, con-

sultation services, and materials and supplies. The staff now consists of the director, a full-time psychologist, two half-time social workers, ten teachers, two full-time teacher aides, a half-time librarian, three secretaries, and a custodian. In addition, consultation services from medical and other specialists are available including those from the disciplines of psychiatry, neurology, ophthalmology, optometry, and pediatrics.

Several individuals well known for their contributions to this area have been utilized throughout the development of the program. Dr. Albert J. Harris, formerly of the City University of New York and for many years the director of the Queens College Educational Clinic, has been able to provide invaluable assistance.

The total funding for the project is presently derived from Federal sources. Title III PACE (Projects to Advance Creativity in Education) projects are generally funded for three years. At the end of this period it is anticipated that local resources will provide the means for the exemplary and innovative programs to continue. The terminal date of Federal funding of the Learning Center is June, 1969. It is anticipated that more than $500,000. will have been spent to implement and operate the Center during the three year period commencing in July, 1966.

Conceptual Model

The cooperating school districts which the Center serves have a combined elementary and secondary school population of over 65,000 pupils. It was anticipated that approximately one per cent of the school age population would meet the criteria specified for enrollment.

Although the word "dyslexic" was specified in the original application, this term is generally not used in the educational setting. School districts were advised to submit admission applications for all pupils who are reading two or more years below grade level in grades three through six, and one or more years below grade level in grades one and two, and who are not otherwise able to receive intensive and specialized instruction in the local school. It was emphasized that the Center is most interested in enrolling those pupils who have demonstrated sustained inability to profit from the regular language arts instructional program.

The School District Representatives, who generally are administrative, supervisory, or special services personnel attached to the cooperating school districts and who serve as liaisons between the Center and the school districts, were advised not to submit names of individuals who properly belong in special classes, such as those for the mentally retarded or frankly brain injured.

The criteria for admission to the program of the Center were kept as simple as possible. The use of intelligence test data was recommended, but not required. Every effort was made to encourage the referral of pupils within the normal range of intelligence and above, as indicated by achievement in subjects that did not rely heavily on reading and by general observation. Since the school psychologists in many of the cooperating school districts could not provide a psychological evaluation for all pupils referred to the Center, to require this evaluation as a condition for enrollment would have prevented many pupils from participating in the program.

A crucial issue in the implementation of a regional Learning Center is the development of a conceptual model of a school-wide reading and language arts program. This model can assist the cooperating school districts to determine which pupils should properly be referred for enrollment in the Center. The conceptual model offered to the School District Representatives of the cooperating school districtsis indicated in Figure 1. In various discussions the director stressed that developmental, corrective, and remedial reading programs are the proper functions of each of the school districts. The Learning Center, in contrast, would stress a clinical reading program not usually available to any of the school districts. This, indeed, is the crucial innovative feature of the project.

The region in which the Center is located does not have convenient access to a college or medical center which may offer specialized diagnostic or treatment programs for pupils who are seriously underachieving in reading. In the past, pupils had to travel a distance of almost one hundred miles to obtain an evaluation from a college-based reading clinic. Since the inception of the project, evaluations have been offered on a local basis. Furthermore, pupils who require intensive and specialized treatment could be enrolled in an appropriate program.

The clinical reading program indicated in Column IV of Figure 1. is primarily the responsibility of the Learning Center. In contrast to the other three programs which may be offered in the local school districts, the mode of the clinical program is essentially individual or small group instruction. During the present year about 130 pupils attend the Center for tutorial instruction at a given time. Approximately 40 per cent of the pupils are given individual instruction; 50 per cent are taught in groups of two; and only 10 per cent receive instruction in groups of three. Pupils usually attend the Center one hour per day on two alternate days of the week.

Some further distinctions between the clinical program of the Center and

the other reading programs deserve consideration. The instructional objectives of the Center are almost wholly related to word attack skills. As the data in Table 1 indicate , the instructional level of almost 50 per cent of the pupils in the program is first grade or below. Approximately 70 per cent of the pupils are reading at grade level two and below. Obviously, the distinguishing characteristic of the Learning Center is the large number of pupils whose primary need is the development of appropriate word analysis and word recognition skills.

Selection of Pupils

A formal application must be submitted by the cooperating school district for a child to be enrolled in the program. Relevant information is included in the application so that the staff of the Learning Center has some indication about the school history of the pupil. Frequently, a report prepared by the school psychologist or social worker will accompany the application.

A preliminary screening is given to each pupil before actual enrollment in the program. Pupils are transported by school busses to the Center for this purpose. This screening usually involves the administration of a sample graded word list (2), a phonics skills inventory developed by the writer, an informal reading inventory using basal readers (3),

and informal measures of writing and spelling achievement.

The preliminary screening has proven to be a very valuable part of the intake procedure. Pupils are enrolled for individual or group instruction on the basis of their overall performance. Each pupil is assigned an instructional level comparable to the sequences used in most basal readers (primer, 1-2, 3-1, etc.). Pupils who do not meet the criteria for enrollment are no longer considered for tutorial instruction, and an appropriate letter of explanation is sent to the School District Representative, through whom all applications are processed.

Each of the seventeen public and private school districts, except Binghamton, has been assigned two one-hour time periods during which pupils enrolled in the program are brought to the Center. The Binghamton City School District, with a school population of some 12,000 pupils, is the largest district and has been assigned four one-hour periods. Private school pupils comprise about 10 per cent of the total school population and they are involved in the program on a proportional basis.

Pupils are enrolled on the basis of the results of the preliminary screening. After they are enrolled each of the ten reading teachers to whom the pupils are assigned, completes a more comprehensive diagnostic

evaluation. This evaluation may repeat some of the informal tests already applied. In addition, for pupils reading above grade level one, a standardized test is administered, usually an appropriate level of the Metropolitan Achievement Tests. The level which is administered corresponds with the general instructional level in reading as ascertained by informal evaluation. Thus, a pupil in the sixth grade who is reading at the second grade level would receive the Primary II test, and not the one designed for sixth grade pupils.

Although a number of individually applied tests are available at the Center (including the Gilmore Oral Reading Test), limitations have been noted in their use with pupils reading at the primary grade levels. The Gilmore, for example, tends to provide grade equivalents which are considerably higher than both actual reading levels as determined by informal means, and scores reported on group tests (4). After enrollment in the instructional program, interdisciplinary services are available on a selective basis. The staff psychologist provides evaluations for pupils who have not received them in the local schools. The social workers have been able to provide in-depth interviews with parents of more than half of the pupils in attendance. Referrals for psychiatric, pediatric, and ophthalmological evaluations are made by

our teachers, the psychologist, and the social workers. Reports of all evaluations are used for planning appropriate instructional programs. Case conferences are periodically held to determine suitable instructional methods and goals for the more severely underachieving pupil.

Dyslexia: Myth or Reality?

The prevalence of the condition of dyslexia has been the subject of considerable professional controversy during the past sixty years. A significant figure in this country whose name has been associated with the condition is Orton (5). He used the term "developmental alexia" to describe reading and language arts disabilities which were primarily associated with atypical neurological development. His definition of developmental alexia was relatively simple: "Inability to learn to read with the rapidity and skill which would be expected from the individual's mental age and achievements in other subjects."

Although Orton's theoretical formulations were posited some thirty years ago, his influence is still felt in movements which have been inspired by Delacato (6, 7, 8) and his co-workers. Unlike Orton, Delacato's theories have been subjected to systematic evaluation, although there is strong indication that some of this evaluation is less than adequate (9).

The problem has been explored to a considerable degree in England. In the first quarter of this century it was of particular interest to medical specialists, probably because the persistence of the condition tended to place it in the category of a "disability" or disease. Hinshelwood (10) introduced the term "congenital word blindness" in 1917, and considered the condition more or less irremediable. Vernon (11) notes that the term dyslexia was introduced in 1921 (byWallen). Although Vernon, a psychologist, concluded that there is no clear evidence suggesting innate organic factors as the causation of the difficulty, he suggested "that severe cases of disability seldom or never become completely normal."

In recent years in this country the term "specific language disability" has been applied since the retardation is frequently limited to the reading and language arts areas. Gallagher (12) and Silver and Hagin (13) have presented fairly comprehensive descriptions of children with this disability. These authors, two of whom are medical specialists, definitely consider specific language disability or dyslexia to be associated with neurological deficiencies. Silver and Hagin define the term specific reading disability as "indicating those children who, without evidence of structural damage to the central nervous system and without gross defects in the peripheral sensory apparatus, are

retarded in reading with respect to both their mental age and their educational opportunities."

It is beyond the scope of the present paper to offer judgment on the adequacy of the terms "dyslexia" or "specific language disability" as descriptive categories for pupils who have failed to acquire the basic reading and language arts skills. Authorities in the educational community in varying degrees have tended to question the usefulness of these terms. Harris (14) and Spache (15) suggest that only a small proportion of pupils may fail to read because of neurological abnormalities. Bond and Tinker (16) state that brain damage "is a relatively rare cause of reading disability." The consensus of these authorities is that pupils with neurological impairment can make adequate progress in reading and related skills if an appropriate remedial program is applied.

In recent years there has been a definite tendency to consider these pupils as belonging to a distinct subgroup of the population of exceptional children (17, 18, 19). Should this tendency continue, one may anticipate in the near future the offering of specialized programs in graduate schools for teachers of these pupils.

In discussions with parents and school personnel of the cooperating school districts the terms dyslexia and specific language disability are rarely used. With very little perceptible difficulty the target population has been identified by classroom teachers, school psychologists, remedial reading teachers and other personnel in the school districts who refer pupils to the Learning Center.

The characteristics of the pupils enrolled in the program during the second cycle (December, 1967 to March, 1968) appear in Table 1. The following characteristics deserve special mention (the enumerations below correspond to those on Table 1.): (A) The ratio of boys to girls for this particular group was eight to one. (B) Almost 60 per cent of the pupils who were enrolled in the Center during the second cycle had repeated one year of school. More than 70 per cent of the pupils had experienced at least one half year of grade retention (the Binghamton district has a semester promotion policy). (C) During the present year of operation admission applications on behalf of the secondary school pupils were not encouraged. The enrollment during the second cycle consisted almost entirely of elementary school pupils. The majority of the pupils attending the Center were in the third and fourth grades. (D) The functional retardation of the pupils, defined as the difference between present grade placement and instructional

level, was more than two and a half years for the girls and boys combined. The functional retardation of the boys alone exceeded the girls by .6 of a year. (G) During the cycle pupils may terminate instruction upon the recommendation of the staff of the Center, and other pupils are enrolled as space becomes available. The group enrolled as of March 19, 1968, had characteristics essentially similar to those of the preceding group. (H) The instructional level of almost half the pupils is first grade and below. The fourteen pupils reading at pre-primer level may for practical purposes be designated as non-readers. The median instructional level for this group was the lower half of the second grade; this must be contrasted to the median present grade placement which was grade four. If the instructional level was compared to the median grade placement which the group should have registered had they not been retained, the degree of retardation would have been even more pronounced.

The IQ evaluations performed by the staff psychologist or made available by the school districts indicate that with rare exception the pupils enrolled in the Learning Center are of normal intelligence and above. The extent of retardation of the group, the persistence of the problem for many of the pupils (despite grade retention and exposure to previous remedial programs) and the prevalence of symptoms which have been noted in the literature as indicative of neurological impairment,

strongly suggest that a substantial proportion of the pupils enrolled in the program warrant a descriptive classification other than that of severely underachieving pupils. Whether the terms dyslexia or specific reading disability are more appropriate is a matter which may be clarified when additional data is processed.

Instructional Program

Following the preliminary diagnosis selected pupils are invited to participate in the instructional program. The school districts transport the pupils to the Center. Each child receives two hours of instruction per week (one hour per day on alternate days). At the time of the development of this report (March, 1968) a total of 137 pupils were enrolled. The total enrollment of new students since September, 1967, was 181. Of this number, 44 or 24 per cent were terminated from instructional activity. There is presently a waiting list for enrollment of almost as many pupils as are now currently in attendance.

Every effort has been made to maintain appropriate communications with the classroom teachers of the pupils in the program. Soon after enrollment, a comprehensive diagnostic report is developed and returned to the cooperating school district which the child attends. This report is essentially an evaluation of reading achievement and related areas,

but also contains any insight that the teacher at the Center may have obtained as a result of the pupil's responses to the program. At approximately three months intervals, a progress report is developed for each child in the program and this too is submitted to the school district for the perusal by the classroom teacher and other personnel who may be involved in the educational progress of the pupil.

In addition to formal reports, the instructional program is terminated for periods of from three to five days at the end of each cycle (approximately of three months duration) so that the teachers in the Center may visit the classroom teachers of the pupils to share information and integrate where possible the instructional programs in both settings. These school visitations by the staff of the Center have been unusually well received by the cooperating school districts and this procedure is clearly an extremely valuable part of the program of the Learning Center.

During the school visitations the classroom teachers are asked to respond to a questionnaire. The two main purposes of the questionnaire are to determine the instructional environment of the child in the home school, and to ascertain the progress which the child may be making in skills and attitude as viewed from the vantage point of the classroom teacher.

Presented in Table 2. is a summary of responses from the classroom teachers of 117 of the pupils involved in the program as of February, 1968; completed interview schedules from twenty teachers were not returned. The analysis of the data confirms all the impressions which have been previously noted about the characteristics of the pupil population which is seen at the Center. Almost 75 per cent of the pupils were taught in classrooms which use only basal readers. A comparable percentage of the classrooms had provision for subgrouping. The three group and two group organizational plan for reading was by far the most common practice for the teaching of reading.

Somewhat less than half of the pupils were in heterogenous classes with respect to general achievement. Slightly less than thirty per cent of the pupils were in classes designated as low achievement. Less than three per cent of the pupils were enrolled in high achievement classes, probably because they attend schools which have a general achievement level which is considerably above the norm.

At least forty per cent of the classroom teachers used basal readers at the recommended instructional level as indicated in the diagnostic reports sent by the Learning Center on behalf of the pupils enrolled in the program. It is interesting to note that 45.3 per cent of the

teachers were not able to use basal readers at the instructional level recommended by the Center; this percentage corresponds very closely with the percentage of pupils enrolled in heterogenous classes. There is good reason to believe that most teachers in heterogenous classes are not able to accommodate very readily the instructional needs of pupils who are reading distinctly below the general class norm.

It again should be noted that the mean functional retardation for pupils involved in the program approaches three grade levels. Almost eighty per cent of the pupils who participated in the tutorial program at the Learning Center during this cycle did not participate in any special remedial class in the home school. The twenty per cent who did attend remedial classes had an average session of one hour per week.

Reading and social studies are the subjects which give our pupils the most difficulty; in contrast, no relative strengths were noted for 34.7 per cent of the pupils while an almost comparable percentage showed strength in math. Although the mean IQ of the group (data not presented in this report) was distinctly normal or above, there were few academic areas in which the pupils demonstrated strength relative to the regular class as a whole. One may with good reason hypothesize that a severe reading disability has a pervasive influence which results in

relatively poor achievement in all subject areas. About seventy per cent of the pupils did receive passing grades for reading on the report card despite the severity of underachievement, and this practice is encouraged by the Learning Center.

The staff of the Center is composed of teachers with varying degrees of specialized training and experience. During the current academic year four of the teachers are regularly employed by the cooperating school districts and serve internships at the Center for periods of six months or one year. Thus, during the present year six teachers will have received intensive exposure to diagnostic and tutorial practices. This aspect of the program has been unusually well received and warrants emulation by other regions which contemplate the establishment of regional learning centers.

The instructional techniques applied at the Center tend to be eclectic. The massive Cooperative Research Program in First-Grade Reading Instruction (20) which was sponsored by the U.S.O.E., strongly suggests that achievement is a function of the interaction of teacher, pupil, and method. A typical instructional lesson would include some reading in a basal reader, some type of reinforcement activity for development of word analysis and word recognition skills, reading

from supplementary books, and occasional use of workbooks. Games and game-like activities are interspersed throughout the instructional hour. Many of these games were developed by the teaching staff to meet the specific instructional needs of the pupils.

There has been a definite tendency in the program to make use of a linguistic approach to the teaching of word attack skills. The report of the Cooperative Research Program noted that "indications are that initial reading vocabulary should be selected with a greater balance between phonetically regular words and high utility words. It is likely that introducing words solely on the basis of frequency of use presents an unusually complex decoding task for the beginning reader." Substantially the same recommendation is made by Chall (21) following her survey of first grade approaches to the teaching of reading. The instructional program at the Center also incorporates the writing component both as an end in itself and as a reinforcement for word attack skills. Many of our children could not write the complete alphabet upon entering the program and almost all the pupils demonstrate marked disability in the mechanics of writing, spelling, and sentence structure.

To date, it has not been found necessary to introduce into the program

the more exotic instructional approaches which are currently being marketed for the teaching of the basic reading skills. Ample use is made of audio-visual instructional media, including the overhead projector, the tape recorder, the record player, and the Language Master (Bell and Howell).

The Center was able to acquire a substantial number of standard typewriters from the commercial department of one of the local high schools. The typewriter appears to be of particular value as an instructional vehicle, particularly for those students who lack the alphabet identification skills. The language experience approach and the Phono-visual method have also been used selectively by the staff.

Many of the pupils involved in the program have problems of personal, social, and school adjustment. A strong therapeutic environment is provided at the Center wherever possible. The active cooperation of the children is solicited not only in the selection of books used for reading, but also to a considerable degree in the planning of the overall structure of the tutorial session. While some pupils may prefer to work at strictly academic skills, others may on occasion prefer to draw or to make a model airplane or car. These latter activities are then incorporated into the reading lesson, such as

reading the required directions. Ten to fifteen minutes at the end of each instructional hour the pupils may go to the Activity Room. This room is staffed by two teacher-aides both of whom have acquired special skills and interest in developing arts and crafts projects. This facet of the program has tended to promote a very positive identification for the Center, and probably accounts to some degree for the active interest in the Center which the pupils have demonstrated.

Since the inception of the program in September, 1967, the number of students who have indicated resistance to attending the program has been markedly low. In part II of the school visitation interview schedule, it may be observed that the classroom teachersfelt that less than two per cent of those in attendance did not want to continue instruction. In contrast, slightly less than 90 per cent of the pupils manifested a positive interest in the tutorial program (question 2).

The impact of the program on the skills and attitudes of the pupils is indicated on Table 2(part II! question 1). The classroom teachers observed that 77 per cent of the pupils in attendance manifested some improvement in skills, while only 3.3 per cent indicated no improvement. The classroom teachers further noted that about 75.2 per cent of the pupils manifested improvement in general attitude, while 8.6 per cent manifested no improvement.

Further indications of the effectiveness of the program are provided in Appendix I, which contains the comments by 22 of the classroom teachers. The total number of comments recorded on the interview schedule was 24. Clearly, of those classroom teachers who were motivated to comment, almost all felt that the program was beneficial in skills or attitude or both.

Conclusion

The clinical program is only one facet of the project. During the past year the Center has been able to sponsor many conferences during which personnel from the cooperating school districts were able to hear specialists and authorities from a variety of disciplines, including psychiatry, clinical psychology, clinical reading, and developmental reading. In September, 1968, a colloquia will be sponsored by the Learning Center for sixty teachers and administrators from the area schools. It is anticipated that fifteen two-hour sessions will be held after school for the participants. The emphasis during the colloquia will be on the development of those skills which classroom teachers may apply to support the tutorial activity initiated at the Learning Center. Other plans include the development of a professional library and resource center which will be made available to all teachers in the cooperating school districts. Funds have been

provided for some research activity and it is anticipated that this aspect of the project will receive considerable emphasis during the coming year.

There is ample indication that the implementation of the Learning Center, with its emphasis upon the diagnosis and treatment of pupils who manifest the dyslexic syndrome, has been an innovative venture of considerable merit. Visiting officials from a variety of school systems have visited the Center and have expressed a firm interest in emulating if not all its practices, at least its objectives. School districts which do not have access to a university or hospital educational clinic should especially realize the importance of developing learning disability centers so that the thousands of pupils now destined to become functional illiterates, will have some opportunity to make the most of their potential to compete in our society with its ever increasing demands for academic skills.

Figure 1.

CONCEPTUAL MODEL OF SCHOOL-WIDE READING AND LANGUAGE ARTS PROGRAM

	I Developmental	II Corrective	III Remedial	IV Clinical
Mode	Whole class Sub-grouping Individualized Programmed	Sub-grouping Individualized Programmed	Small group Special class	Individual Small group
Level	Pre-School Primary Intermediate J.H.S.	Primary Intermediate J.H.S. High School	Primary Intermediate J.H.S. High School	Primary Intermediate J.H.S. High School
Objectives	Readiness Word Attack Comprehension Language Arts Study Skills	Readiness Word Attack Comprehension Language Arts	Word Attack Comprehension	Word Attack
Population	All Pupils	Below Grade Expectations	Considerably Below Grade Expectation & Potential Achievement	Significantly Below Grade Expectation & Potential Achievement

LEARNING CENTER
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Table 1.

Data on Students Enrolled at the Learning Center
For the Second Cycle (as of 12/21/67)

A. Sex	Number	Per Cent
Boys	110	88.7
Girls	14	11.3
Total	124	100.0

B. Extent of Grade Retention

1/2 Year	1	.8
1 Year	73	58.9
1 1/2 Year	6	4.8
2 Years	7	5.7
3 Years	2	1.6
No Retention	35	28.2
Total	124	100.0

C. Present Grade Placement

First Grade	2	1.6
Second Grade	14	11.3
Third Grade	34	27.4
Fourth Grade	33	26.6
Fifth Grade	22	17.8
Sixth Grade	16	12.9
Seventh Grade	1	.8
Eighth Grade	1	.8
Vocational	1	.8
Total	124	100.0

D. Functional Retardation (Difference between present Grade Level and Instructional Level)

14 Girls	Mean of 2.1 yrs. below present grade level
110 Boys	Mean of 2.7 yrs. below present grade level
124 Total	Mean of 2.67 yrs. below present grade level

Table 1. (cont'd.)

E. Grouping of Students at Center

	Number	Per Cent
Group of 1	48	38.7
Group of 2	64	51.6
Group of 3	12	9.7
Total	124	100.0

F. Age of Students

	Mean Age	Range
14 Girls	10 yrs. 2 mos.	8 yrs. 2 mos - 12 yrs. 1 mo.
110 Boys	10 yrs. 5 mos.	7 yrs. 7 mos. - 14 yrs. 0 mos.
124 Total		

Supplemental Data (as of 1/19/68)

G. Present Grade Placement

	Number	Per Cent
First Grade	3	2.4
Second Grade	15	11.9
Third Grade	38	30.1
Fourth Grade	33	26.2
Fifth Grade	22	17.5
Sixth Grade	13	10.3
Seventh Grade	1	0.8
Eighth Grade	1	0.8
Total	126	100.0

Median Group: Fourth Grade

Table 1. (cont'd.)

H. Instructional Level

	Number	Per Cent	
PP	14	11.1	
P	23	18.3	
1-1	15	11.9	
1-2	8	6.4	
		47.7	Sub-Total First Grade
2-1	18	14.3	
2-2	11	8.7	
		23.0	Sub-Total Second Grade
3-1	15	11.9	
3-2	10	7.9	
		19.8	Sub-Total Third Grade
4-1	11	8.7	
4-2	1	0.8	
		9.5	Sub-Total Fourth Grade
Total	126	100.0	

Median Group: 2-1

Table 2.

SUMMARY OF CLASSROOM TEACHER RESPONSES TO THE SCHOOL VISITATION INTERVIEW SCHEDULE
(February, 1968)

I. Classroom Practices

1. What instructional system for reading is used in the classroom?

	No. of Responses *	% of Responses
Basal Readers	87	74.3
Basal and Special Kit	13	11.1
Individualized Reading	9	7.7
Special Kit Only	4	3.4
Basal and Individualized	3	2.6
Special Kit and Individualized	1	0.9
Total	117	100.0

2. What grouping practices are used for reading?

Three Groups	39	33.3
Two Groups	34	29.1
Four Groups	16	13.7
No Groups	15	12.8
Not Indicated	13	11.1
Total	117	100.0

3. What is the general achievement level of this class?

Heterogeneous	56	47.8
Low Achievement	34	29.1
Average Achievement	24	20.5
High Achievement	3	2.6
Total	117	100.0

4. Is the pupil using a basal reader at the instructional level recommended in the diagnostic report sent in by the Learning Center?

No	53	45.3
Yes	47	40.2
Not Indicated	10	8.6
Undecided	7	5.9
Total	117	100.0

* Listed in order of descending frequency.

Table 2 (cont'd.)

5. Does the pupil attend special remedial classes in the home school?

	No. of Responses	% of Responses
No	93	79.5
Yes*	23	19.7
Not Indicated	1	0.8
Total	117	100.0

* Average Session - 1 hour
Range - 40 min. - 2 hr.

6. In which of these areas, if any, does the pupil demonstrate a distinct weakness relative to the regular class as a whole? (Check all appropriate areas)

Reading	92	36.1
Social Studies	60	23.5
Mathematics	52	20.4
Science	40	15.7
No Relative Weakness Noted	9	3.5
Not Indicated	2	0.8
Total	255	100.0

7. In which of these areas, if any, does the pupil demonstrate strength relative to the regular class as a whole? (Check all appropriate areas)

No relative strengths noted	50	34.7
Math	46	32.0
Science	22	15.3
Social Studies	18	12.5
Reading	6	4.2
Not Indicated	2	1.3
Total	144	100.0

8. What mark (or similar type of evaluation) was given for reading on the last report card?

Passing	83	71.0
Failing	15	12.8
Mark Not Given	15	12.8
Not Indicated	4	3.4
Total	117	100.0

Table 2 (cont'd.)

II. Program Evaluation

1. Has any improvement been observed by the classroom teacher?

	No. of Responses	% of Responses
A. In Skills:		
Yes	90	77.0
Undecided	23	19.7
No	4	3.3
Total	117	100.0
B. In Attitude:		
Yes	88	75.2
Undecided	19	16.2
No	10	8.6
Total	117	100.0

2. Does the pupil seem to want to continue instruction at the Center?

Yes	105	89.8
Undecided	10	8.5
No	2	1.7
Total	117	100.0

3. As the classroom teacher, do you recommend that the pupil continue instruction at the Center?

Yes	98	83.7
No	14	12.0
Undecided	5	4.3
Total	117	100.0

REFERENCES

1. Committee on Education and Labor, Report of the Special Subcommittee on Education, Study of the United States Office of Education, 90th Congress, 1st Session, House Document No. 193. Washington, D.C.: U.S. Government Printing, 1967, p. 267.

2. Harris, A.J., How To Increase Reading Ability. New York: David McKay, 1961, 1. 198.

3. Betts, E.A., Foundations of Reading Instruction. New York: American Book, 1960, p. 449.

4. Harris, A.J., Coleman, C., Serwer, B.L., and Gold, L., A Continuation of the Craft Project. New York: Associated Educational Services, 1968, pp. 174, 190.

5. Orton, S.T., Reading, Writing and Speech Problems in Children. New York: W.W. Norton, 1937.

6. Delacato, C.M., The Treatment and Prevention of Reading Problems. Springfield, Illinois: Charles C. Thomas, 1959.

7. Delacato, C.H., The Diagnosis and Treatment of Speech and Reading Problems. Springfield, Illinois: Charles C. Thomas, 1963.

8. Delacato, C.H., Neurological Organization and Reading. Springfield, Illinois: Charles C. Thomas, 1966.

9. Glass, G.V., and Robbins, M.P.,"A Critique of Experiments on the Role of Neurological Organization in Reading Performance." Reading Research Quarterly, Vol. 3 (Fall, 1967),pp. 5-51.

10. Hinshelwood, J., Congenital Word Blindness. London: H.K. Lewis, 1917.

11. Vernon, M.D., Backwardness in Reading: A Study of Its Nature and Origin. Combridge, England: The University Press, 1958.

12. Gallagher, J.R.,"Specific Lanquage Disability (Dyslexia)." Clinical Proceedings of the Children's Hospital, Vol. XVI (January, 1960), pp. 3-15.

13. Silver, A.A., and Hagin, R.A., "Specific Reading Disability: An Approach to Diagnosis and Treatment." The Journal of Special Education, Vol. 1 (Winter, 1967), pp. 109-118.

14. Harris, A.J., How To Increase Reading Ability. New York: David McKay, 1961, pp. 229, 245-248.

15. Spache, G.D., Toward Better Reading. Champaign, Illinois: Garrard, 1963, p. 313.

16. Bond, G.L., and Tinker, M.A., Reading Difficulties: Their Diagnosis and Correction. New York: Appleton-Century-Crofts, 1967, pp. 118-119.

17. Money, J., The Disabled Reader. Baltimore: The John Hopkins Press, 1966.

18. Frierson, F.C., and Barbe, W.B., Educating Children With Learning Disabilities: Selected Readings. New York: Appleton-Century-Crofts, 1967.

19. Crawford, J.E., Children With Subtle Perceptual Motor Difficulties. Pittsburgh: Stanwix House, Inc., 1966.

20. Bond, G.L., and Dykstra, R., "The Cooperative Research Program in First-Grade Reading," Reading Research Quarterly, II (Summer, 1967).

21. Chall, J.S., Learning to Read: The Great Debate. New York: McGraw-Hill, 1967.

Appendix I

Selected Comments Taken From The "School Visitation Interview Schedule"

LEARNING CENTER
58 Oak Street
Binghamton, New York 13905

SELECTED COMMENTS TAKEN FROM THE
"SCHOOL VISITATION INTERVIEW SCHEDULE"

The following comments are presented to illustrate the favorable reaction to the program of the Center, as noted on questionnaires completed by classroom teachers during February, 1968, at the conclusion of the second cycle of the program.

District: Windsor No. of Sessions to Date: 21

"Richard's experiences at the Center have given him a broader background of knowledge he can use in discussion. He seems much more interested in participating in a group discussion and group experiences. He is also beginning to take more pride in his own work."

District: Binghamton No. Sessions to Date: 33

"I have had Bruce in my class only since February 1, 1968. I am impressed with some of his reading skills as he seems to have more background in such things as blends, for example, than many others in the class."

District: Union-Endicott No. Sessions to Date: 37

"Joe has shown a great interest in social studies and science this year. He feels sad to miss the continuity of work covered. He is also upset over the spotty instruction he has in math, caused by missing two classes each week. Now that he is showing more confidence in word attack, and an awakening in many new learning areas, I feel at this time the exposure to new experiences and new vocabulary will perhaps outweigh the continuation at the Learning Center."

District: Johnson City No. Sessions to Date: 37

"I feel that Michael is being helped a great deal at the school."

District: Chenango Forks No. Sessions to Date: 36

"Thomas enjoys going to the Learning Center. The books on his level have

made the work more interesting to him. His mother says he shows more interest in reading at home."

District: Union-Endicott No. Sessions to Date: 8

"Debbie's reading classes at the Center have done much in this short a time to improve her attitude as well as bring her out of herself a little more. We're pleased and hope she will continue to improve."

District: Maine-Endwell No. Sessions to Date: 14

"Ann showed an improvement in a January test in reading over the Fall one: 2.6 to 3.8 in a class of 36 pupils Ann ranked 16 from the top in her score on the standardized test for basal reader 3.1."

District: Chenango Valley No. Sessions to Date: 33

"I am very pleased with Jeff's improvement in reading and with the enthusiadm he has now for school. Much of the credit must go to the Learning Center."

District: Binghamton No. Sessions to Date: 46

"Gilbert's entire attitude toward school has changed. He seems to enjoy participating in class activities and is now making a much better social adjustment."

District: Binghamton No. Sessions to Date: 43

"James seems much improved and more confident of his ability."

District: Union-Endicott No. Sessions to Date: 55

"Cheryl has shown growth in many areas of reading. The excellent rapport that exists between Miss Huebner and Cheryl has contributed greatly to her improvements."

District: Binghamton No. Sessions to Date: 34

"Michael has emotional problems. He needs help in this area first before he can learn. He can't concentrate for any length of time."

District: Union-Endicott No. Sessions to Date: 31

"There has been a marked improvement in her work. She now applies her full attention to her work. Consequently, she is enjoying success for the first time this year."

District: Johnson City No. Sessions to Date: 36

"I think the Center has achieved its purpose and done a good job with Charles. He can help himself now."

District: Windsor No. Sessions to Date: 9

"I was very glad to have met Linda's teacher from the Learning Center. I'm sure that by our close cooperation, and work with Linda, much, much good will be derived from this program. It is most important that we keep in close touch so that our efforts will reach a common goal."

District: Maine-Endwell No. Sessions to Date: 11

"I feel Roger is so out of place in the fourth grade that the Center and its program is essential to him as far as improving his reading."

District: Union-Endicott No. Sessions to Date: 37

"Gerald has sparked up considerably since September. He at first just sat and stared. He seemed too ashamed to talk and when he did, it was so low and hesitating, that he could not be understood. Since then he has discovered a new world in social studies and science. He loves the stories I read to the children, and gains some very helpful mental pictures from them. Stressing "you can win more flies with sugar then with vinegar", I have praised him often. This has borne fruit. This past week he wrote a very creditable six paragraph story on Lincoln. Granted there were many mistakes in spelling (his greatest weakness), but his ideas and expression were very good.

I'm sure he has gained in word attack and confidence in reading. He offers

to read, participates, keeps his place, and even helps some who are having troubles on a word. He is much more outgoing.

Yes, please keep him. I think this boy deserves attention. I appreciate what you have done, and in the meantime, I will continue to bolster this boy's confidence."

District: Johnson City No. Sessions to Date: 44

"Bill seems to have more confidence in himself as far as his reading of Social Studies goes, but he lacks comprehension in this reading. He does well in math examples but has problem understanding problems."

District: Owego-Apalachin No. Sessions to Date: 40

"Clifford reads in the classroom with 8 other 5th grade children who are taught basal reading by the reading teacher. We use Open Highways 5 - Scott, Foresman Series. I find that Clifford's skills in word attack and word recognition have grown tremendously this year. He does still need individual help which is unfortunately not available yet at our school. I have been extremely disappointed not to have been able to talk with Clifford's teacher from the Center in Binghamton - poor communication on my part no doubt. I should very much like to visit with you and perhaps this can be arranged."

District: Binghamton No. Sessions to Date: 38

"Steven needs the individual attention given him at the Center. We must treat him as a member of the entire class. I think the Center will ultimately lead the way to Steven's success in Reading. Steven was recently put in a regular 5A grade. The teacher understands Steven's needs and is most cooperative. My decision to place Steven in a regular class was based on my talk with his teacher at the Center to prove to Steven that effort was really worthwhile and that we all cared about his future success.

District: Union-Endicott No. Sessions to Date: 31

"Barbara has recently been very excited about participating in our oral reading sessions. She brings books from the reading center for this. She has done an excellent job."

District: Johnson City No. Sessions to Date: 13

"I feel that the Reading Center is helping David and giving him a greater incentive to read."